

## 5kV - SHV COAXIAL CONNECTOR SERIES

### FEATURES

- Rated voltage 5kV<sub>DC</sub> / 3.5kV<sub>RMS</sub>
- Recessed contacts
- Available with PTFE and PEEK insulators
- Completed cable assemblies available
- RoHS compliant

### APPLICATIONS

- Instrument high voltage connections
- High voltage power supplies / amplifiers
- Medical electronics
- Nuclear instrumentation
- Test and measurement equipment
- Safe high voltage laboratory wiring

### DESCRIPTION

5kV SHV (**S**afe **H**igh **V**oltage – Nuclear Instrumentation Module Standard) reverse polarity, coaxial high voltage connectors with high temperature PTFE or high temperature / radiation tolerant PEEK insulators.

The straight cable plugs are compatible with coaxial cable groups RG58 or RG316, respectively.

For suitable cable please see our PE-X insulated **HRG58-20-2** or **HRG58-20-XV-U-2**,

FEP insulated high temperature **HRG303-40-XV-U-2**, **HRG316-10-B-2** or silicone insulated high temperature **HSL-10S-0.5-A-2** types.

The connectors are RoHS compliant according to 2011/65/EU / 2015/863 / Exemption 6c

A suitable crimping tool is available on request.

Please see our HC51 or HC52 series for 10kV<sub>DC</sub> or 20kV<sub>DC</sub> models, respectively.

Remark: SHV connectors are not intermateable with HC51, HC52, MHV or BNC connectors.

The connectors must never be mated or unmated when energized.

### SPECIFICATIONS

Operating voltage (at sea level):	max. 5000V <sub>DC</sub> / 3500V <sub>RMS</sub>
Test voltage:	max. 10000V <sub>DC</sub> / 5000V <sub>RMS</sub>
Impedance:	50Ω
Frequency:	DC to 300MHz
Insulation resistance:	> 1000GΩ
Center contact resistance:	< 2mΩ
Outer contact resistance:	< 1.5mΩ
Operating current:	max. 10A
Operating temperature:	-65 to +165°C
Mating cycles:	min. 500
Termination center conductor:	solder
Termination outer conductor:	crimp

Ratings listed above apply to clean mated connector pairs in standard atmospheric conditions. When connectors are used in an adverse environment (such as high temperature, humidity, pollution content, extreme mechanical exposure, etc.) the connector should be derated. The fitness for use must be proved by extended operational tests.

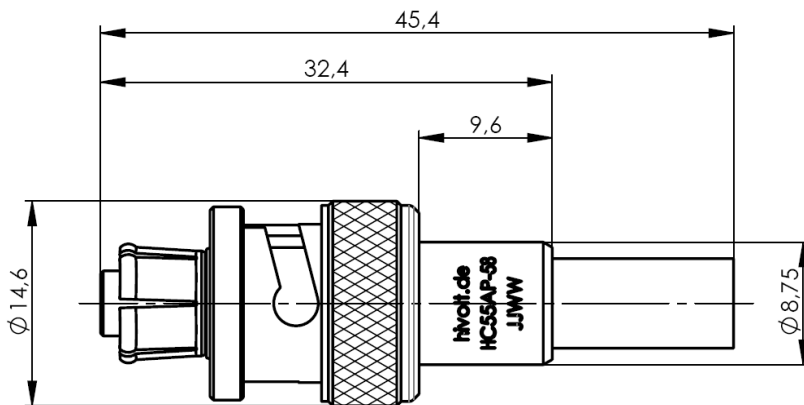


## MODEL OVERVIEW

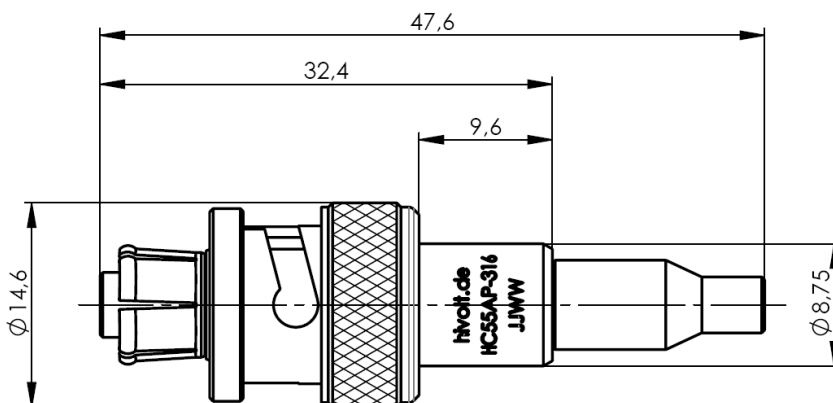
Part Number Description	Center Contact Material/ Plating	Outer Contact Material/ Plating	Insulator Material	Body Material/ Plating	Crimp Ferrule Material/ Plating	Gasket Material	Cable Group
<b>HC55AP-58</b> Straight Cable Plug	CuBe2Pb/ NiP-Au	CuBe2Pb/ CuSnZn	PTFE	CuZn/ CuSnZn	Cu/ CuSnZn	Silicone	RG58
<b>HC55AP-58-K</b> Straight Cable Plug	CuBe2Pb/ NiP-Au	CuBe2Pb/ CuSnZn	PEEK	CuZn / CuSnZn	Cu/ CuSnZn	Silicone	RG58
<b>HC55AP-316</b> Straight Cable Plug	CuBe2Pb/ NiP-Au	CuBe2Pb/ CuSnZn	PTFE	CuZn / CuSnZn	Brass/ Ni	Silicone	RG316

## DIMENSIONS

### HC55AP-58, HC55AP-58-K



### HC55AP-316



- All dimensions are in mm; drawings not to scale.
- All values and dimensions without given tolerances are nominal.

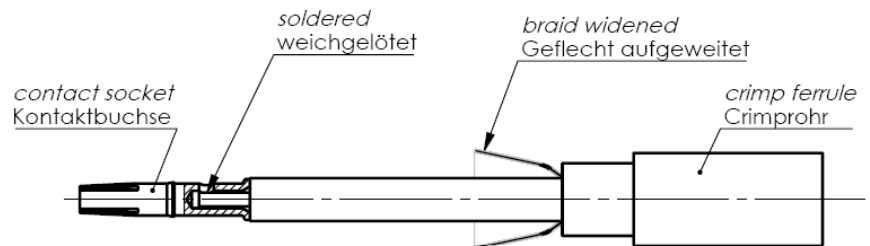
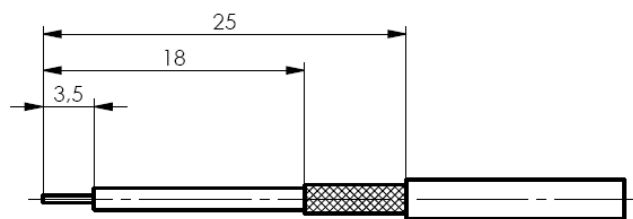
## ORDERING INFORMATION

5kV Straight Solder/Crimp Cable Plug (female) PTFE for RG58  
5kV Straight Solder/Crimp Cable Plug (female) PEEK for RG58  
5kV Straight Solder/Crimp Cable Plug (female) PTFE for RG316

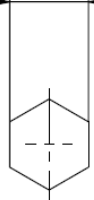
**HC55AP-58**  
**HC55AP-58-K**  
**HC55AP-316**

Bespoke ready-to-use high voltage cable assemblies based on different high voltage cable types are available. The cable assemblies are fully tested. Please contact [hivolt.de](http://hivolt.de) for details.

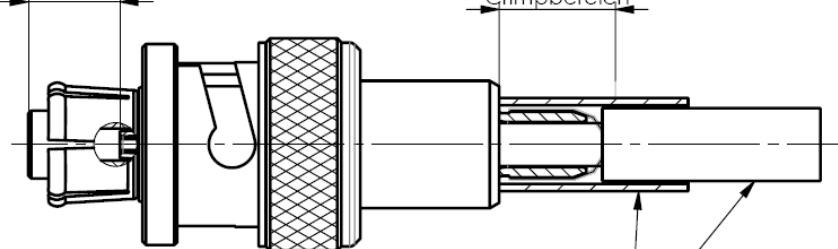
## CABLE ASSEMBLY INSTRUCTIONS HC55AP-58, HC55AP-58-K



hex 5,41 x 8  
recommended crimp insert  
empfohlener Crimpeinsatz

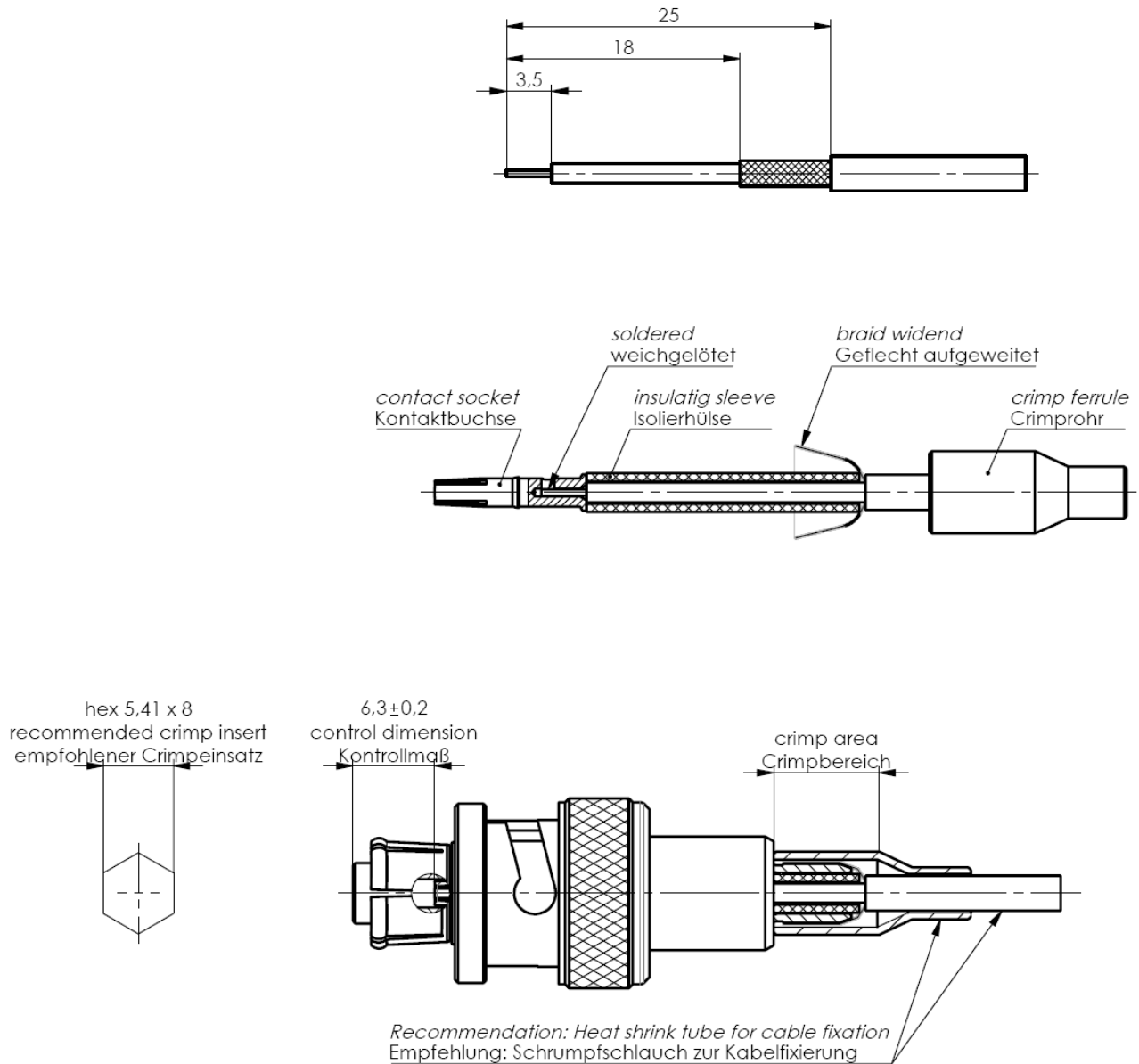


6,3±0,2  
control dimension  
Kontrollmaß



Recommendation: Heat shrink tube for cable fixation  
Empfehlung: Schrumpfschlauch zur Kabelfixierung

## ▪ CABLE ASSEMBLY INSTRUCTIONS HC55AP-316



All dimensions are in mm; drawings not to scale

### Disclaimer

The information given in this data sheet is technical data, not assured product characteristics. It has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. The user has to ensure by adequate tests that the product is suitable for his application regarding safety and technical aspects. hivolt.de GmbH & Co. KG does not assume any liability arising out of the application or use of any product described.

### Safety Advice

Design, installation and inspection of machinery and devices carrying high voltage require accordingly trained and qualified personnel. Appropriate safety rules and directives must be complied with.

Improper handling of high voltage can mean severe injuries or death and may cause serious collateral damage!